```
=> file .nash
=> s  fimh and fimc and crystal?
L1            7 FILE MEDLINE
L2            9 FILE CAPLUS
L3            4 FILE SCISEARCH
L4            3 FILE LIFESCI
L5            3 FILE BIOSIS
L6            3 FILE EMBASE

TOTAL FOR ALL FILES
L7           29 FIMH AND FIMC AND CRYSTAL?

=> dup rem l7
PROCESSING COMPLETED FOR L7
L8           13 DUP REM L7 (16 DUPLICATES REMOVED)

=> d ibib abs 1-13

L8   ANSWER 1 OF 13  EMBASE  COPYRIGHT 2004 ELSEVIER INC. ALL RIGHTS RESERVED.
     on STN
ACCESSION NUMBER:    2004315499  EMBASE
TITLE:               Development of a recombinant Fimch vaccine for urinary
                     tract infections.
AUTHOR:              Langermann S.; Ripley Ballou W.
CORPORATE SOURCE:    S. Langermann, MedImmune, Inc., Gaithersburg, MD, United
                     States
SOURCE:              Advances in Experimental Medicine and Biology, (2004) 539
                     B/- (635-653).
                     Refs: 47
                     ISSN: 0065-2598  CODEN: AEMBAP
COUNTRY:             United States
DOCUMENT TYPE:       Journal; General Review
FILE SEGMENT:        004     Microbiology
                     026     Immunology, Serology and Transplantation
                     028     Urology and Nephrology
                     037     Drug Literature Index
                     038     Adverse Reactions Titles
LANGUAGE:            English

L8   ANSWER 2 OF 13  CAPLUS  COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER:        2002:977958  CAPLUS
DOCUMENT NUMBER:         138:54541
TITLE:                   Mutated bacterial adhesin proteins for inducing high
                         potency inhibitory antibodies against urinary tract
                         infection
INVENTOR(S):             Langermann, Solomon R.; Hultgren, Scott J.; Hung,
                         Chia-Suei; Bouckaert, Julie
PATENT ASSIGNEE(S):      Medimmune, Inc., USA
SOURCE:                  PCT Int. Appl., 1194 pp.
                         CODEN: PIXXD2
DOCUMENT TYPE:           Patent
LANGUAGE:                English
FAMILY ACC. NUM. COUNT:  1
PATENT INFORMATION:

     PATENT NO.          KIND   DATE        APPLICATION NO.          DATE
     ----------------    ----   --------    --------------------     --------
     WO 2002102974        A2    20021227    WO 2001-US47994          20011210
     WO 2002102974        A3    20030522
         W:  AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,
             CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,
             GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,
             LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH,
             PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA,
             UG, UZ, VN, YU, ZA, ZW
         RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,
             KG, KZ, MD, RU, TJ, TM, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB,
             GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA,
             GN, GQ, GW, ML, MR, NE, SN, TD, TG
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US 2003199071 A1 20031023 US 2001-15085 20011210
PRIORITY APPLN. INFO.: US 2000-254353P P 20001208
US 2001-301878P P 20010629

AB The present invention provides bacterial immunogenic agents for administration to humans and non-human animals to stimulate an immune response, It particularly relates to the vaccination of mammalian species, esp. human patients, with variants of the Escherichia coli FimCH protein that elicit antibodies that have better functional inhibitory activity than antibodies raised against wild type protein. In particular, such variants include mutations that promote a more open confirmation of the **FimH** protein, particularly in regions involved in mannose binding, to expose regions previously poorly exposed and mutations that abolish a significantly reduce mannose binding. In another aspect, the invention provides antibodies against such proteins and protein complexes that may be used in passive immunization to protect or treat pathogenic bacterial infections. The present invention also provides machine readable media embedded with the three-dimensional at. structure coordinates of FimCH bound to mannose, and subsets thereof, and methods of using the **crystal** structure to provide candidate amino acid residues for mutation. In addn., the invention provides methods for identifying **FimC** or **FimH** binding compds. and for computational design of the binding compds.

L8 ANSWER 3 OF 13 MEDLINE on STN
ACCESSION NUMBER: 2002272407 MEDLINE
DOCUMENT NUMBER: PubMed ID: 12010488
TITLE: Structural basis of tropism of Escherichia coli to the bladder during urinary tract infection.
COMMENT: Comment in: J Urol. 2003 Jul;170(1):335. PubMed ID: 14567339
AUTHOR: Hung Chia-Suei; Bouckaert Julie; Hung Danielle; Pinkner Jerome; Widberg Charlotte; DeFusco Anthony; Auguste C Gale; Strouse Robert; Langermann Solomon; Waksman Gabriel; Hultgren Scott J
CORPORATE SOURCE: Department of Molecular Microbiology, Washington University School of Medicine, St. Louis, MO 63110, USA.
CONTRACT NUMBER: AI29549 (NIAID)
AI48689 (NIAID)
AI49950 (NIAID)
DK51406 (NIDDK)
GM54033 (NIGMS)
SOURCE: Molecular microbiology, (2002 May) 44 (4) 903-15.
Journal code: 8712028. ISSN: 0950-382X.
PUB. COUNTRY: England: United Kingdom
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
OTHER SOURCE: PDB-1KIU; PDB-1KLF
ENTRY MONTH: 200208
ENTRY DATE: Entered STN: 20020516
Last Updated on STN: 20020830
Entered Medline: 20020829

AB The first step in the colonization of the human urinary tract by pathogenic Escherichia coli is the mannose-sensitive binding of **FimH**, the adhesin present at the tip of type 1 pili, to the bladder epithelium. We elucidated **crystallographically** the interactions of **FimH** with D-mannose. The unique site binding pocket occupied by D-mannose was probed using site-directed mutagenesis. All but one of the mutants examined had greatly diminished mannose-binding activity and had also lost the ability to bind human bladder cells. The binding activity of the mono-saccharide D-mannose was delineated from this of mannotriose (Man(alpha 1-3)[Man(alpha 1-6)]Man) by generating mutants that abolished D-mannose binding but retained mannotriose binding activity. Our structure/function analysis demonstrated that the binding of the monosaccharide alpha-D-mannose is the primary bladder cell receptor for uropathogenic E. coli and that this event requires a highly conserved **FimH** binding pocket. The residues in the **FimH** mannose-binding pocket were sequenced and found to be invariant in over 200 uropathogenic strains of E. coli. Only enterohaemorrhagic E. coli (EHEC) possess a sequence variation within the mannose-binding pocket of **FimH**, suggesting a naturally occurring mechanism of attenuation in

EHEC bacteria that would prevent them from being targeted to the urinary tract.

L8 ANSWER 4 OF 13 MEDLINE on STN
ACCESSION NUMBER: 2002484756 MEDLINE
DOCUMENT NUMBER: PubMed ID: 12270717
TITLE: Chaperone-independent folding of type 1 pilus domains.
AUTHOR: Vetsch Michael; Sebbel Peter; Glockshuber Rudi
CORPORATE SOURCE: Institut fur Molekularbiologie und Biophysik, Eidgenossische Technische Hochschule Honggerberg, CH-8093 Zurich, Switzerland.
SOURCE: Journal of molecular biology, (2002 Sep 27) 322 (4) 827-40. Journal code: 2985088R. ISSN: 0022-2836.
PUB. COUNTRY: England: United Kingdom
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200212
ENTRY DATE: Entered STN: 20020925
Last Updated on STN: 20021219
Entered Medline: 20021218

AB An elementary step in the assembly of adhesive type 1 pili of Escherichia coli is the folding of structural pilus subunits in the periplasm. The previously determined X-ray structure of the complex between the type 1 pilus adhesin **FimH** and the periplasmic pilus assembly chaperone **FimC** has shown that **FimH** consists of a N-terminal lectin domain and a C-terminal pilin domain, and that **FimC** exclusively interacts with the pilin domain. The pilin domain fold, which is common to all pilus subunits, is characterized by an incomplete beta-sheet that is completed by a donor strand from **FimC** in the **FimC-FimH** complex. This, together with unsuccessful attempts to refold isolated, urea-denatured **FimH** in vitro had suggested that folding of pilin domains strictly depends on sequence information provided by **FimC**. We have now analyzed in detail the folding of **FimH** and its two isolated domains in vitro. We find that not only the lectin domain, but also the pilin domain can fold autonomously and independently of **FimC**. However, the thermodynamic stability of the pilin domain is very low (8-10kJmol(-1)) so that a significant fraction of the domain is unfolded even in the absence of denaturant. This explains the high tendency of structural pilus subunits to aggregate non-specifically in the absence of stoichiometric amounts of **FimC**. Thus, pilus chaperones prevent non-specific aggregation of pilus subunits by native state stabilization after subunit folding.

L8 ANSWER 5 OF 13 MEDLINE on STN DUPLICATE 1
ACCESSION NUMBER: 2002219719 MEDLINE
DOCUMENT NUMBER: PubMed ID: 11955018
TITLE: Localization of uroplakin Ia, the urothelial receptor for bacterial adhesin **FimH**, on the six inner domains of the 16 nm urothelial plaque particle.
AUTHOR: Min Guangwei; Stolz Martin; Zhou Ge; Liang Fengxia; Sebbel Peter; Stoffler Daniel; Glockshuber Rudi; Sun Tung-Tien; Aebi Ueli; Kong Xiang-Peng
CORPORATE SOURCE: Structural Biology Program, Skirball Institute of Biomolecular Medicine, New York, NY 10016, USA.
CONTRACT NUMBER: DK39753 (NIDDK)
DK52206 (NIDDK)
DK57269 (NIDDK)
SOURCE: Journal of molecular biology, (2002 Apr 12) 317 (5) 697-706. Journal code: 2985088R. ISSN: 0022-2836.
PUB. COUNTRY: England: United Kingdom
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200205
ENTRY DATE: Entered STN: 20020417
Last Updated on STN: 20020516
Entered Medline: 20020515

AB The binding of uropathogenic Escherichia coli to the urothelial surface is a critical initial event for establishing urinary tract infection, because

it prevents the bacteria from being removed by micturition and it triggers bacterial invasion as well as host cell defense. This binding is mediated by the **FimH** adhesin located at the tip of the bacterial type 1-fimbrium and its urothelial receptor, uroplakin Ia (UPIa). To localize the UPIa receptor on the 16 nm particles that form two-dimensional **crystals** of asymmetric unit membrane (AUM) covering >90 % of the apical urothelial surface, we constructed a 15 A resolution 3-D model of the mouse 16 nm AUM particle by negative staining and electron **crystallography**. Similar to previous lower-resolution models of bovine and pig AUM particles, the mouse 16 nm AUM particle consists of six inner and six outer domains that are interconnected to form a twisted ribbon-like structure. Treatment of urothelial plaques with 0.02-0.1 % (v/v) Triton X-100 allowed the stain to penetrate into the membrane, revealing parts of the uroplakin transmembrane moiety with an overall diameter of 14 nm, which was much bigger than the 11 nm value determined earlier by quick-freeze deep-etch. Atomic force microscopy of native, unfixed mouse and bovine urothelial plaques confirmed the overall structure of the luminal 16 nm AUM particle that was raised by 6.5 nm above the luminal membrane surface and, in addition, revealed a circular, 0.5 nm high, cytoplasmic protrusion of approximately 14 nm diameter. Finally, a difference map calculated from the mouse urothelial plaque images collected in the presence and absence of recombinant bacterial **FimH/FimC** complex revealed the selective binding of **FimH** to the six inner domains of the 16 nm AUM particle. These results indicate that the 16 nm AUM particle is anchored by a approximately 14 nm diameter transmembrane stalk, and suggest that bacterial binding to UPIa that resides within the six inner domains of the 16 nm AUM particle may preferentially trigger transmembrane signaling involved in bacterial invasion and host cell defense.

L8 ANSWER 6 OF 13 CAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 2
ACCESSION NUMBER: 2002:521229 CAPLUS
DOCUMENT NUMBER: 137:366060
TITLE: Trivalent cluster mannosides with aromatic partial structure as ligands for the type 1 fimbrial lectin of Escherichia coli
AUTHOR(S): Rockendorf, Niels; Sperling, Oliver; Lindhorst, Thisbe K.
CORPORATE SOURCE: Institute of Organic Chemistry, Christiana-Albertina-University of Kiel, Kiel, D-24098, Germany
SOURCE: Australian Journal of Chemistry (2002), 55(1 & 2), 87-93
CODEN: AJCHAS; ISSN: 0004-9425
PUBLISHER: CSIRO Publishing
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 137:366060
GI

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB Mannose-specific adhesion of Escherichia coli bacteria to their host cells is mediated by so-called type 1 fimbriae contg. lectin domains present on the type 1 fimbrial **FimH** protein. The **crystal** structure of a **FimH-FimC** (chaperone) protein complex revealed a no. of amino acids in the carbohydrate binding site with arom. side chains. This finding is in keeping with earlier results showing high inhibitory potencies of aryl mannosides when tested as inhibitors of type 1 fimbriae-mediated bacterial adhesion. In addn., clustering of mannosyl moieties also led to favorable effects, as in the case of trivalent cluster mannosides such as (I). In order to combine both, i.e. the clustering approach and the advantage of an arom. moiety, the herein presented study has emphasized the synthesis of 3 cluster mannosides, (II, R = Ph, CH2Ph, CH2O(CH2)3Ph), as ligands for the type 1 fimbrial lectin, which contain a Ph partial structure in different proximity to the core of the mol. The inhibitory potencies of the new cluster mannosides were detd. in ELISAs.

REFERENCE COUNT: 16 THERE ARE 16 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 7 OF 13 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2001:114938 CAPLUS
DOCUMENT NUMBER: 134:173013
TITLE: Anti-bacterial compounds directed against pilus biogenesis, adhesion and activity; co-**crystals** of pilus subunits and methods of use thereof
INVENTOR(S): Hultgren, Scott J.; Sauer, Frederic G.; Waksman, Gabriel; Fuetterer, Klaus
PATENT ASSIGNEE(S): Washington University, USA
SOURCE: PCT Int. Appl., 144 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001010386	A2	20010215	WO 2000-US22087	20000811
WO 2001010386	A3	20010802		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
AU 2000074703	A5	20010305	AU 2000-74703	20000811
PRIORITY APPLN. INFO.:			US 1999-148280P P	19990811
			WO 2000-US22087 W	20000811

OTHER SOURCE(S): MARPAT 134:173013

AB Many Gram-neg. pathogens assemble adhesive structures on their surfaces that allow them to colonize host tissues and cause disease. Novel compns. for the prevention or inhibition of pilus assembly in Gram-neg. pathogens are disclosed. Interacting with the binding site of pili subunits will neg. affect the chaperone/usher pathway which is one mol. mechanism by which Gram-neg. bacteria assemble adhesive pili structures and thus prevent or inhibit pilus assembly. Addnl., novel compds. and compns. for interfering or preventing adhesion of pileated bacteria to host tissues are provided. Such compds. and compns. prevent or inhibit pili adhesion to host tissues by interacting with the mannose-binding domains on pilus adhesin subunits. Also provided are methods for the treatment or prevention of diseases caused by tissue-adhering pilus-forming bacteria by interaction with the binding between pilus subunits; the binding between pilus subunits and periplasmic chaperones; and the binding of a pilus adhesin to the host epithelial tissue. Also provided are pharmaceutical prepns. capable of interacting with the binding between pilus subunits, between pilus subunits and periplasmic chaperones and between the pilus adhesin. The present invention further relates to co-**crystals** of pilus chaperone-subunit co-complexes, detailed three dimensional structural information illustrating the interaction between pilus subunits and/or between a pilus subunit and a chaperone for a pilus chaperone-subunit co-complex and methods of utilizing the X-ray **crystallog**. data from such co-**crystals** to design, identify and screen for compds. that exhibit antibacterial activity. The present invention also relates to machine readable media embedded with the three-dimensional at. structure coordinates of pilus chaperone-subunit co-complex and subsets thereof.

L8 ANSWER 8 OF 13 MEDLINE on STN DUPLICATE 3
ACCESSION NUMBER: 2001693195 MEDLINE
DOCUMENT NUMBER: PubMed ID: 11739641
TITLE: Uroplakin Ia is the urothelial receptor for uropathogenic Escherichia coli: evidence from in vitro **FimH** binding.
AUTHOR: Zhou G; Mo W J; Sebbel P; Min G; Neubert T A; Glockshuber

R; Wu X R; Sun T T; Kong X P
CORPORATE SOURCE: Skirball Institute of Biomolecular Medicine, Department of Biochemistry, New York University School of Medicine, 550 First Avenue, New York, NY 10016, USA.
CONTRACT NUMBER: PO1 DK 52206 (NIDDK)
SOURCE: Journal of cell science, (2001 Nov) 114 (Pt 22) 4095-103. Journal code: 0052457. ISSN: 0021-9533.
PUB. COUNTRY: England: United Kingdom
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200204
ENTRY DATE: Entered STN: 20011217
Last Updated on STN: 20020412
Entered Medline: 20020410

AB The binding of uropathogenic Escherichia coli to the urothelial surface is a crucial initial event for establishing urinary tract infection because it allows the bacteria to gain a foothold on the urothelial surface, thus preventing them from being removed by micturition. In addition, it triggers bacterial invasion as well as host urothelial defense. This binding is mediated by the **FimH** adhesin located at the tip of the bacterial type 1-fimbrium, a filamentous attachment apparatus, and its urothelial receptor. We have prepared a biotinylated, recombinant **FimH-FimC** adhesin:chaperone complex and used it to identify its mouse urothelial receptor. The **FimH-FimC** complex binds specifically to a single 24 kDa major mouse urothelial plaque protein, which we identified as uroplakin Ia by mass spectrometry, cDNA cloning and immunoreactivity. The terminal mannosyl moieties on Asn-169 of uroplakin Ia are responsible for **FimH** as well as concanavalin A binding. Although **FimH** binds to uroplakin Ia with only moderate strength (K(d) approximately 100 nM between pH 4 and 9), the binding between multiple fimbriae of a bacterium and the **crystalline** array of polymerized uroplakin receptors should achieve high avidity and stable bacterial attachment. The **FimH-FimC** complex binds preferentially to the mouse urothelial umbrella cells in a pattern similar to uroplakin staining. Our results indicate that the structurally related uroplakins Ia and Ib are glycosylated differently, that uroplakin Ia serves as the urothelial receptor for the type 1-fimbriated E. coli, and that the binding of uropathogenic bacteria to uroplakin Ia may play a key role in mediating the urothelial responses to bacterial attachment.

L8 ANSWER 9 OF 13 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2002:692518 CAPLUS
DOCUMENT NUMBER: 138:268230
TITLE: Design, synthesis and biological evaluation of pilicides: inhibitors of pilus assembly in pathogenic bacteria
AUTHOR(S): Larsson, Andreas; Emtenaes, Hans; Svensson, Anette; Pinkner, Jerome S.; Hultgren, Scott J.; Almqvist, Fredrik; Kihlberg, Jan
CORPORATE SOURCE: Department of Organic Chemistry, Umea University, Umea, SE-901 87, Swed.
SOURCE: Peptides: The Wave of the Future, Proceedings of the Second International and the Seventeenth American Peptide Symposium, San Diego, CA, United States, June 9-14, 2001 (2001), 636-637. Editor(s): Lebl, Michal; Houghten, Richard A. American Peptide Society: San Diego, Calif.
CODEN: 69DBAL; ISBN: 0-9715560-0-8
DOCUMENT TYPE: Conference
LANGUAGE: English

AB A **crystal** structure of the complex between the periplasmic chaperone PapD, involved in assembly of P Pili in uropathogenic Escherichia coli, and a 19-mer peptide corresponding to the C-terminus of the adhesin PapG was used to develop two classes of peptidomimetics as potential inhibitors of the chaperone/subunit complex by rational drug design. The amino acid derivs. were synthesized through an N-alkylation of an amino acid followed by acylation of the resulting secondary amine. The 2-pyridinones were obtained via a novel procedure based on the use of acid chlorides and nitriles as starting materials. Within the amino acid

derivs. and 2-pyridinones, which bind to periplasmic chaperones and even dissoc. chaperone, pilus subunit complexes were detected.
REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 10 OF 13 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2000:477356 CAPLUS
DOCUMENT NUMBER: 133:248542
TITLE: X-ray structure of the **FimC-FimH** chaperone-adhesin complex from uropathogenic Escherichia coli
AUTHOR(S): Sokurenko, E. V.
CORPORATE SOURCE: University of Washington, USA
SOURCE: Chemtracts (2000), 13(6), 377-382
CODEN: CHEMFW; ISSN: 1431-9268
PUBLISHER: Springer-Verlag New York Inc.
DOCUMENT TYPE: Journal
LANGUAGE: English
AB To explain the structural basis of interaction of the mannose-binding fimbrial lectin, **FimH**, of Escherichia coli, with the mol. chaperone, **FimC**, and the receptor saccharide, the x-ray structure anal. of the complex **FimC/FimH** and inhibitor mol., C-HEGA, was performed.
REFERENCE COUNT: 34 THERE ARE 34 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 11 OF 13 MEDLINE on STN
ACCESSION NUMBER: 1999402043 MEDLINE
DOCUMENT NUMBER: PubMed ID: 10475844
TITLE: How chaperones protect virgin proteins.
COMMENT: Comment on: Science. 1999 Aug 13;285(5430):1058-61. PubMed ID: 10446050
Comment on: Science. 1999 Aug 13;285(5430):1061-6. PubMed ID: 10446051
AUTHOR: Eisenberg D
CORPORATE SOURCE: DOE Laboratory of Structural Biology and Molecular Medicine, University of California, Los Angeles, CA 90095, USA.. david@mbi.ucla.edu
SOURCE: Science, (1999 Aug 13) 285 (5430) 1021-2.
Journal code: 0404511. ISSN: 0036-8075.
PUB. COUNTRY: United States
DOCUMENT TYPE: Commentary
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199909
ENTRY DATE: Entered STN: 19990913
Last Updated on STN: 19990913
Entered Medline: 19990902

L8 ANSWER 12 OF 13 MEDLINE on STN DUPLICATE 4
ACCESSION NUMBER: 1999377245 MEDLINE
DOCUMENT NUMBER: PubMed ID: 10446051
TITLE: X-ray structure of the **FimC-FimH** chaperone-adhesin complex from uropathogenic Escherichia coli.
COMMENT: Comment in: Science. 1999 Aug 13;285(5430):1021-2. PubMed ID: 10475844
AUTHOR: Choudhury D; Thompson A; Stojanoff V; Langermann S; Pinkner J; Hultgren S J; Knight S D
CORPORATE SOURCE: Department of Molecular Biology, Uppsala Biomedical Center, Swedish University of Agricultural Sciences, Box 590, S-753 24 Uppsala, Sweden.
CONTRACT NUMBER: RO1AI29549 (NIAID)
RO1DK51406 (NIDDK)
SOURCE: Science, (1999 Aug 13) 285 (5430) 1061-6.
Journal code: 0404511. ISSN: 0036-8075.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals

OTHER SOURCE: PDB-1QUN
ENTRY MONTH: 199909
ENTRY DATE: Entered STN: 19990913
Last Updated on STN: 19990913
Entered Medline: 19990902

AB Type 1 pili-adhesive fibers expressed in most members of the Enterobacteriaceae family-mediate binding to mannose receptors on host cells through the **FimH** adhesin. Pilus biogenesis proceeds by way of the chaperone/usher pathway. The x-ray structure of the **FimC-FimH** chaperone-adhesin complex from uropathogenic Escherichia coli at 2.5 angstrom resolution reveals the basis for carbohydrate recognition and for pilus assembly. The carboxyl-terminal pilin domain of **FimH** has an immunoglobulin-like fold, except that the seventh strand is missing, leaving part of the hydrophobic core exposed. A donor strand complementation mechanism in which the chaperone donates a strand to complete the pilin domain explains the basis for both chaperone function and pilus biogenesis.

L8 ANSWER 13 OF 13 MEDLINE on STN DUPLICATE 5
ACCESSION NUMBER: 2004395321 IN-PROCESS
DOCUMENT NUMBER: PubMed ID: 15299958
TITLE: **Crystallization** and preliminary X-ray diffraction studies of the **FimC-FimH** chaperone-adhesin complex from Escherichia coli.
AUTHOR: Knight S
SOURCE: Acta crystallographica. Section D, Biological crystallography, (1997 Mar) 53 (Pt 2) 207-10. Journal code: 9305878. ISSN: 0907-4449.
PUB. COUNTRY: Denmark
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: IN-DATA-REVIEW; IN-PROCESS; NONINDEXED
ENTRY DATE: Entered STN: 20040810
Last Updated on STN: 20040810

AB A complex of the periplasmic chaperone **FimC** and the mannose-binding adhesin **FimH** from the Escherichia coli type 1 pilus system has been **crystallized** from ammonium sulfate solution using the hanging-drop vapour-diffusion method. The **crystals** diffract to a minimum Bragg spacing of 2.7 A and belong to the space group P4(1)2(1)2 or P4(3)2(1)2 with cell dimensions a = b = 97.7, c = 215.9 A at room temperature. Data to 3.0 A have been collected from a single-**crystal** frozen to T = 100 K.

=> s mannose and adhesion and chaperon
L9 0 FILE MEDLINE
L10 0 FILE CAPLUS
L11 0 FILE SCISEARCH
L12 0 FILE LIFESCI
L13 0 FILE BIOSIS
L14 0 FILE EMBASE

TOTAL FOR ALL FILES
L15 0 MANNOSE AND ADHESION AND CHAPERON

=> s periplasmic chaperon
L16 0 FILE MEDLINE
L17 1 FILE CAPLUS
L18 0 FILE SCISEARCH
L19 0 FILE LIFESCI
L20 0 FILE BIOSIS
L21 0 FILE EMBASE

TOTAL FOR ALL FILES
L22 1 PERIPLASMIC CHAPERON

=> d ibib abs

L22 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2003:737137 CAPLUS
DOCUMENT NUMBER: 139:259946

TITLE: Innate immune system-directed vaccines comprising PAMP in combination with antigen
INVENTOR(S): Medzhitov, Ruslan M.; Kopp, Elizabeth
PATENT ASSIGNEE(S): Yale University, USA
SOURCE: U.S. Pat. Appl. Publ., 58 pp., Cont.-in-part of U.S. Ser. No. 752,832, abandoned.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 3
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.		DATE
US 2003175287	A1	20030918	US 2002-319854		20021213
US 2002061312	A1	20020523	US 2001-752832		20010103
PRIORITY APPLN. INFO.:			US 2001-752832	B2	20010103
			US 2001-340174P	P	20011214
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AB The present invention provides novel vaccines, methods for the prodn. of such vaccines and methods of using such vaccines. The novel vaccines of the present invention combine both of the signals necessary to activate native T-cells-a specific antigen and the co-stimulatory signal-leading to a robust and specific T-cell immune response. The vaccines comprise one or more PAMPs (i.e. pathogen assocd. mol. patterns), in combination with one or more antigens. The PAMP is a chaperone, **periplasmic chaperon**, BLP, flagellin, or FimC. The vaccines may also be fusion proteins of antigens and PAMPs.

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